

### **AMENDMENTS TO THE CLAIMS**

Claims 1-33 are pending in the instant application. Claims 1-30 were previously presented, and claims 31-33 are new claims. Claims 1, 11 and 21 have been amended to clarify the claim language. Claims 6, 16 and 26 are cancelled, and have been rewritten as new claims 31-33 in independent form. Claims 1, 11 and 21 are independent claims. Claims 2-10, 12-20, and 22-30 depend directly or indirectly from claims 1, 11 and 21, respectively.

Listing of claims:

1. (Currently Amended) A method for providing and configuring secure communication links, the method comprising:

determining any one usable media pair from all existing media pairs of a first device;

selecting any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair; and

assigning said selected any one channel to said any one usable media pair;

wherein said first device communicates using at least three media pairs of said all existing media pairs.

2. (Previously presented) The method according to claim 1, comprising notifying a second device of said assigned any one channel which corresponds to said any one media pair.

3. (Previously presented) The method according to claim 2, comprising cross-connecting a corresponding channel and media pair for said second device, said cross-connected channel and media pair being equivalent to said selected any one channel assigned to said any one media pair.

4. (Previously presented) The method according to claim 1, comprising negotiating said assignment of said selected any one channel to said any one media pair.

5. (Previously presented) The method according to claim 1, comprising selecting from a plurality of predetermined channel and media pair assignments, a particular one of said channel and media pair assignment.

6. (Cancelled)

7. (Previously presented) The method according to claim 6, comprising securely transferring communication traffic via said communication channel and media pair.

8. (Previously presented) The method according to claim 7, comprising securely transferring control information via at least one of said communication channel and media pair.

9. (Previously presented) The method according to claim 8, comprising:  
monitoring at least one of said communication channel and media pair by a second device; and  
determining said selected any one channel assigned to said any one media pair.

10. (Previously presented) The method according to claim 9, wherein said control information is at least one of authentication information, encryption information, channel setup information and link provisioning and link maintenance information.

11. (Currently Amended) A machine-readable storage having stored thereon, a program having at least one code section for providing and configuring

secure communication links, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from all existing media pairs of a first device;

selecting any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair; and

assigning said selected any one channel to said any one usable media pair;  
wherein said first device communicates using at least three media pairs of said all existing media pairs.

12. (Previously presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for notifying a second device of said assigned any one channel which corresponds to said any one media pair.

13. (Previously presented) The machine-readable storage according to claim 12, wherein said at least one code section comprises code for cross-connecting a corresponding channel and media pair for said second device, said cross-connected channel and media pair being equivalent to said selected any one channel assigned to said any one media pair.

14. (Previously presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for negotiating said assignment of said selected any one channel to said any one media pair.

15. (Previously presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for selecting from a plurality of predetermined channel and media pair assignments, a particular one of said channel and media pair assignment.

16. (Cancelled)

17. (Previously presented) The machine-readable storage according to claim 16, wherein said at least one code section comprises code for securely transferring communication traffic via said communication channel and media pair.

18. (Previously presented) The machine-readable storage according to claim 17, wherein said at least one code section comprises code for securely transferring control information via at least one of said communication channel and media pair.

19. (Previously presented) The machine-readable storage according to claim 18, wherein said at least one code section comprises:

code for monitoring at least one of said communication channel and media pair by a second device; and

code for determining said selected any one channel assigned to said any one media pair.

20. (Previously presented) The machine-readable storage according to claim 19, wherein said control information is at least one of authentication information, encryption information, channel setup information and link provisioning and link maintenance information.

21. (Currently Amended) A system for providing and configuring secure communication links, the system comprising:

at least one controller enabled to determine any one usable media pair from all existing media pairs of a first device;

at least one selector enabled to select any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair; and

said at least one controller enabled to assign said selected any one channel to said any one usable media pair;

wherein said first device communicates using at least three media pairs of said all existing media pairs.

22. (Previously presented) The system according to claim 21, wherein said at least one controller is enabled to notify a second device of said assigned any one channel which corresponds to said any one media pair.

23. (Previously presented) The system according to claim 22, wherein said at least one selector is enabled to cross-connect a corresponding channel and media pair for said second device, said cross-connected channel and media pair being equivalent to said selected any one channel assigned to said any one media pair.

24. (Previously presented) The system according to claim 21, wherein said at least one controller is enabled to negotiate said assignment of said selected any one channel to said any one media pair.

25. (Previously presented) The system according to claim 21, wherein said at least one selector is enabled to select from a plurality of predetermined channel and media pair assignments, a particular one of said channel and media pair assignment.

26. (Cancelled)

27. (Previously presented) The system according to claim 26, wherein said at least one controller is enabled to transfer communication traffic via said communication channel and media pair.

28. (Previously presented) The system according to claim 27, wherein said at least one controller is enabled to transfer control information via at least one of said communication channel and media pair.

29. (Previously presented) The system according to claim 28, wherein at least one controller associated with a second device is enabled to:

monitor at least one of said communication channel and media pair by a second device; and

determine said selected any one channel assigned to said any one media pair.

30. (Previously presented) The system according to claim 29, wherein said control information is at least one of authentication information, encryption



information, channel setup information and link provisioning and link maintenance information.

31. (New) A method for providing and configuring secure communication links, the method comprising:

determining any one usable media pair from all existing media pairs of a first device, wherein said first device communicates with at least three media pairs of said all existing media pairs;

selecting any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair;

assigning said selected any one channel to said any one usable media pair;

designating a first combination of said channel assigned to said any one usable media pair as a communication channel and media pair; and

designating a second combination of said channel assigned to said any one usable media pair as a control channel and media pair.

32. (New) A machine-readable storage having stored thereon, a program having at least one code section for providing and configuring secure communication links, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from all existing media pairs of a first device, wherein said first device communicates with at least three media pairs of said all existing media pairs;

selecting any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair;

assigning said selected any one channel to said any one usable media pair;

designating a first combination of said channel assigned to said any one usable media pair as a communication channel and media pair; and

designating a second combination of said channel assigned to said any one usable media pair as a control channel and media pair.

33. (New) A system for providing and configuring secure communication links, the system comprising:

at least one controller enabled to determine any one usable media pair from all existing media pairs of a first device, wherein said first device communicates with at least three media pairs of said all existing media pairs;

at least one selector enabled to select any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair;

said at least one controller enabled to assign said selected any one channel to said any one usable media pair;

said at least one selector enabled to designate a first combination of said channel assigned to said any one usable media pair as a communication channel and media pair; and

said at least one selector enabled to designate a second combination of said channel assigned to said any one usable media pair as a control channel and media pair.